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Barbara Sanford Oral History

Barbara Sanford
The Jackson Laboratory

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The Jackson Laboratory
Oral History Collection

Interviewer's Comments

Narrator's Name Dr. Barbara Sanford

Interviewer's observations about the interview setting, physical description of the narrator, comments on narrator's veracity and accuracy, and candid assessment of the historical value of the memoir.

NOTE: Use parentheses () to enclose any words, phrases or sentences that should be regarded as confidential.

Barbara Sanford's interview echoes most of what I have heard from many of the staff regarding the Lab's mission and goals. The Lab's ideal size, geographical location--with its pluses and minuses--and the environment in which to do science in the current period--all find echoes on other tapes.

There is little of candor, consequence or calculation here. Sanford clearly recognizes the stressful nature of scientific life in these times of federal cutbacks, and, as well, the frustrations of directing a laboratory whose size, complexity and needs preclude personal scientific work by the Director. In the face of such frustrations, Sanford seemed patient to the point of resignation, aware that necessary evolution doesn't come overnight. If her six years as Director might have witnessed anecdotes, amusing incidents, or memorable events, we aren't privy to them here. Nor is any reference made to some of the Lab's current activities, problems, challenges, efforts. Sanford probably has a vision of her long-term goals for the Lab, but she never articulates them clearly here.

In this short (45 minute) interview, I came away with the general impression that this was an exercise in courtesy, yet another task dutifully completed in the role of being Director, but not something done with interest, enthusiasm, or an eye to her place in history. Too bad, for Sanford is in an interesting position as the leader of the Lab in a time of transition, internal change, and external challenge.

Compare this tape to those of Beck, Prehn, Coleman, Harrison, Lawson, Barker, and Fox, for a variety of different impressions of Sanford, and how she is doing her job.

7 November 1986
Date

Susan Mehrtens
Interviewer's name

The Jackson Laboratory
INTERVIEW DATA SHEET

This section is to be completed by the Interviewer.

Narrator Dr Barbara Sanford Address The Jackson Lab Bar Harbor Me Phone 207-288-3311
Birthdate _____ Birthplace _____ Interviewer Dr Susan Mathews Phone 207-244-1553
Date(s) & Place(s) of Interview(s) 1 Nov 86 The Jackson Lab
Collateral Material Yes ____ No X Terms _____

Complete each of these sections as the tape is processed in each step.

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Place Bar Harbor

Date 7 November 1985

Narrator

for the Laboratory

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Interview Contents
Dr. Barbara Sanford

The Jackson Laboratory
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Collateral Materials Report

Narrator's Name Dr Barbara Sanford

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Interviewer's Notes and Word List
Dr. Barbara Sanford

Brown
Herman Chase
Sewall Wright
Tibby Russell
C.C. Little
Earl Green
Dana Farber
Boston
Washington
New York
Rich Prehn
Watson and Crick
Sloan Kettering
Mass General Hospital
Michigan
Tufts
Harvard
Maine

This is the tape of an oral history interview of Dr. Barbara Sanford, given as part of the Jackson Laboratory Oral History Project, sponsored by the Acadia Institute. This interview was held on November 7th, 1986, in Dr. Sanford's office at the Jackson Laboratory, in Bar Harbor, Maine. The interviewer was Dr. Susan E. Mehrtens.

SM: How about we start by my asking how you first heard of the Jackson Lab.

BS: I first heard of the Jackson Laboratory when I was a graduate student at Brown in the 1950's. My advisor was Herman Chase, who was a very distinguished mammalian geneticist, who had studied with Sewall Wright, the same person who trained Tibby Russell and a number of other people who are linked with the Jackson Laboratory.

SM: Was C.C Little then the Director?

BS: No, it was Earl Green.

SM: And what had you heard about the Lab?

BS: As a geneticist, I knew quite a bit about research at the Laboratory, and of course the general impression of geneticists has always been that the Lab is a very strong mammalian genetics institution in research and also in training and resource programs.

SM: Have you worked with or used Jax mice?

BS: Yes.

SM: Now, how was it that you happened to come to the Jackson Laboratory?

BS: Well, I came to the Jackson Laboratory unexpectedly from

my point of view. I was at the Dana Farber Cancer Institute, where I was Director of Research. I had moved back to Boston from Washington, with the intent of staying there. My family lived around Boston, and I was not considering a change, when I got a call from the Chairman of the Search Committee asking if I would be willing to be considered for the position of Director of the Jackson Laboratory. Initially, I said no, that I was well satisfied where I was. Then I got a second call a couple of months later, urging me more strongly to at least meet with the Search Committee in New York. Then I thought, "Well, it wouldn't hurt to talk with them." By the time I left the meeting in New York, I had decided I really would like to be the Director, and not long afterwards, I was appointed.

SM: Now do you think the Laboratory was fairly sold to you, that is to say, that they--

BS: They didn't need to "sell" the Laboratory to me. I knew a lot about the Laboratory, not just from contact when I had been a graduate student, but from a number of people here on the staff. I knew Rich Prehn very well. I had a pretty good idea of the nature of the Laboratory and what was going on here, although certainly not the way that I do today in terms of detail.

SM: I've interviewed some sixty people now, and my impression is that the Laboratory went through an oscillation in that time from the transfer from Green to Prehn to you, from an

extremely tight organization in administration to, in Rich's own words, almost no administration at all. He didn't like it. Did you realize when you were coming in that you were coming to a place that had sort of gone from the alpha to the omega?

BS: Yes. I realized that, and I think that you can see why that would produce some strain within the organization. Earl Green is extremely methodical and well organized and in his time, things were very tightly controlled. Rich's personality and operating style are quite different, and adapting to the change produced some confusion.

SM: But you had to contend with it. I would think the buck would stop here.

BS: Well, we've been trying to get back somewhere in the middle.

SM: Has it been as easy job?

BS: Well (sigh). I don't know. (laughter) I don't think you would say it's been an **easy** job, but it's less difficult now than six years ago, and we're pretty stable administratively now.

SM: When you came, were there problems the Lab had that you didn't know about?

BS: Oh certainly! There would be anywhere: you just don't know in detail what the problems are until you are part of the place.

SM: Do you think the Laboratory's mission over the years has

evolved, has changed, from what C.C. Little first conceived?

BS: I don't think the Laboratory's basic mission has changed from the focus on genetics and human disease that dates back to C.C. Little. There was a movement toward a major change in focus during Rich Prehn's time, and intentionally so. As I saw it from outside and as I still see it now, Rich had a different vision for the Laboratory from that of the earlier Directors, and the Board initially encouraged him. I think that Rich envisioned a small but excellent mini-university type of place with lots of different types of research going on, without concern for a common focus or any special emphasis on mammalian genetics and development. If he had stayed, who knows? that might have been a workable scenario, but, as it is, we have shifted back to the original focus, but with different approaches and new ideas.

SM: And that was consciously done, the shift back to the stress on genetics?

BS: Well, from my point of view it was. That was probably the most important thing to me in agreeing to come here as Director. As a geneticist that was what I wanted to see happen, and the Board agreed.

SM: Now was there ever any discussion about the Laboratory trying to keep track, or keep pace with advances in genetics? Particularly, I'm thinking now of molecular genetics, because I know you've hired some people. Once upon a time, I think, the Laboratory was very much in the mainstream of classical

mammalian genetics. Since Watson and Crick, there has been this explosion of molecular and at some point the Laboratory brought on new people. Was that consciously done, to keep the Lab--

BS: That was consciously done, but it's probably not as much of a change as you might think. Actually, if you look back at the techniques that were being used while C.C. Little was here--there were breeding experiments, and analyses, histological studies and that sort of thing; then during other periods, we had a switch into new techniques, and approaches at the cell and tissue levels. Molecular biology provides a new approach to looking at the same questions people at the Laboratory have always been interested in. People who are well trained in molecular biology are scarce, and in great demand. We had to spend quite a bit of time recruiting people who would bring in this new technology, and whose research interests would fit well into the Laboratory. But it isn't as if this change meant shifting away from the kinds of research problems that were being studied here.

SM: Do you think it's important for the Director of the Laboratory to be a geneticist?

BS: Being a geneticist makes it a lot easier to understand the nature of the Laboratory and to make decisions in the best interests of the Laboratory. It's also easier to interact with the scientific staff if you have a similar

background. I think that it has a lot of advantages for the Laboratory, to have a geneticist as Director. I don't know that it's essential; probably nothing is.

SM: Do you think it's now the sort of job where a person can't really do lab science and also run the Lab?

BS: I think that's true. Very few people today can run an institution, even a relatively small and simple one, and also hope to keep their own research going. I thought initially that because the Jackson Laboratory is small, compared to, say, Sloan Kettering, or the Dana Farber, it might be possible to do administration part-time and eventually to get back into the laboratory. That's just not feasible. The Laboratory may be small, in terms of having only about 500 employees, but it's very complicated, and there are lots of activities and problems to deal with, without even dreaming of having your own research laboratory too. It used to be possible to do that, but it usually can't be done today. There are just too many demands on a Director's time, whether it's for planning or problem solving or fund-raising or service to the government or whatever it may be. There just isn't the time to allow you to have research activity of your own. Hopefully, you're still much better off as Director if you've **had** a research program and understand how research laboratories work and what a scientist's point of view is likely to be. Your scientific background works for you, but I no longer imagine that, as Director, I could ever have a

laboratory here. That's a long answer to a short question.

SM: I can appreciate your... As you look back on your years here, have there been any anecdotes or situations that are memorable?

BS: I'm sure there will be many things I'll remember in years to come, but I can't dredge any up right this instant that I think are worth recording forever. I imagine you'll get better answers to that question from people like George Snell and Tibby Russell, who were here for thirty years or more.

SM: Oh yes. I have had many amusing anecdotes that people tell me. I guess some of them go back fifty--George Snell was telling me anecdotes of mouse races in the hall, you know (laughter) before we had really rigorous animal health regulations. But Dorothea Bennett recounts the "great paper towel crisis," when the molecular geneticists were doing southern blots and there was this run on paper towels at one point.

BS: Well, there are lots of things like that that make good stories, but that particular event was really just a one-day crisis.

SM: Oh! (laughter)

BS: Actually we have "crises" over minor matters very often. When you work in a laboratory, you tend to get excited about anyone or anything that seems to be interfering with something you want to do. If other people are having the same experience, something trivial can get blown up into a

big matter very quickly. But usually it can also be resolved quickly. (laughter)

SM: What would you say are some of the Laboratory's strengths?

BS: Well, I think that one of the Laboratory's greatest strengths has been the sense of mission and common goals that the Laboratory has had since it was founded. More specifically, I think that one of the Laboratory's greatest strengths is its people. There have always been excellent scientists here, and the Laboratory has attracted bright young scientists, many of whom have stayed for their whole careers. That's unusual, and I think that's a strength. In terms of other employees, partly perhaps because we're on an island and "the biggest business in town," there's a tremendous stability in the work force. Many employees stay for their whole working lives, and most of them really care about the Laboratory. Sometimes this creates problems, because they care so much, that they have opinions about everything and they express them! But they do care and they are loyal to the Laboratory, and that gives the institution a lot of strength. The genetic resources are another great asset. C.C. Little started the Laboratory in the direction of developing the inbred strains and treasuring mutants, many of which are now tremendously important, both to scientists here and to other scientists outside the Laboratory.

SM: People have spoken of the Laboratory--the old-timers

particularly--as a family, and do you still hear people talk about this today, the "sense of loyalty" thing as almost more than just a job?

BS: I think there's a lot of that today. I think that the Laboratory is big enough and complicated enough now, compared to the way it was when C.C. Little came here with his little band of scientists, that you can't really expect quite the same "sense of family," but people have a lot of concern for each other. When someone at the Laboratory is in trouble, there's a rallying around, in a personal sense. There is also a sense of dedication to the Laboratory as a whole--something people belong to and care about and don't look at as just a place to work.

SM: In the other places you have worked, was this also true, or was this closeness unusual?

BS: Well, I think it's quite unusual, but I would have to say that, in spite of its size, there's a lot of that same sense of belonging at the Mass General Hospital, where I worked for a long time. People at MGH tend to love MGH. They think it's the best hospital in the world (which it may very well be) and they take a tremendous amount of pride in the institution. So it isn't just a question of being small or large.

SM: And conversely, what do you think are some of the weaknesses of the Lab?

BS: Well, I don't know that I'd call it a weakness, but one

problem we have is that, perhaps because we are on an island, we sometimes tend to develop a kind of insular mentality. We sometimes begin to think that every problem that comes up is unique to us. If we were in a large city, our scientists, our administrators, and people at all levels would realize that other people are facing similar problems and that we should draw on their experience. We do have a tendency to "reinvent the wheel" and this can be a problem, because we can have an unnecessary diversion of our resources. That's one thing I see as a weakness related to our location. It's a plus, in the long run, to be here, because the environment is really conducive to scholarly effort. And certainly with transportation the way it is today, the scientists on the staff aren't any more isolated than they care to be: They can go to meetings and seminars any place and we have a tremendous amount of exchange (particularly in the summer) with scientists coming here from all over the world.

SM: In terms of your recruiting, though, it does, I suspect, translate into your hiring particularly people for whom this environment is attractive.

BS: I think that's a good point. One of the problems occasionally has been that there were some people who found, after they got here, that they felt too isolated. They missed city activities, weren't happy, and eventually left. More often, people love the environment and don't want to leave, as you very well know. Most of the research staff who

are here now would like to stay for the rest of their lives. We have tried, in recruiting in the last few years, to include the location as part of the recruiting process and we really looked for people who would see living on the island as desirable, so that the location would be a positive feature for them, in terms of the working environment, and also in terms of the island itself. There are lots of people who like cross-country skiing and hiking and sailing, and who like sitting around the fire talking, who aren't alarmed at the possibility of missing the ballet or the opera, or not finding gourmet restaurants open in winter.

SM: I think from what I've heard from the younger staff, too, the issue also is "What would the spouse do?" and "What are the opportunities for the spouse, in terms of employment?"

BS: That's a problem that isn't easily resolved, because this is an area where it can be very hard to find two positions, particularly at the professional level. That has sometimes been a handicap in our efforts to recruit when the spouse couldn't find an opportunity in this area.

SM: Can you think of other weaknesses?

BS: I'm sure there are some, but I can't think of any immediately. Do you have some suggested weaknesses?

SM: What's been surprising to me, and I never thought of it initially when I started this project, but I've heard it from so many people it must be in the consciousnesses of quite a few, is the wish a lot of people have for tighter liaison

with educational institutions that could send them students, pre-docs and post-docs and people like that.

BS: I think that what you are hearing about is an issue of the day. We've been talking a lot about attracting more graduate students in the last year. Traditionally, the Laboratory has not had formal affliations with universities, as a matter of design. When C.C. Little created the Jackson Laboratory, he had been President of the University of Michigan, and one of his major goals was to get away from the bureaucracy of a big university. He wanted to have students here, but not to develop an educational institution as such, or to become part of a larger institution. On the other hand, it's not easy to attract good graduate students to come here for thesis research, and that's been a major topic over the last two or three years. If you're not yourself a degree-granting institution, you're dependent upon cooperation with the faculty at other institutions, and they often want to keep their best graduate students at their own institutions. It isn't an organizational problem: We're able to take students from Tufts, or the University of Maine, or Harvard or anywhere, as long as we have a staff member here who wants to do this and there's a staff member at the other institution willing to share the supervision of the student. The problem is making these one-to-one arrangements: How are our staff members going to interact with faculty members at other institutions, so that they are willing to send some of

their best students come to us? It isn't a problem that we could solve just by allocating money or by setting in motion some formal administrative procedures with one or more universities. I imagine you've been hearing about this mostly from the newer staff, but there are some people who have been here for years who've always felt that way, who have always been looking for ways to attract more graduate students here. We have high school and college students here in the summer, and we have academic students during the year, but it's at the **graduate** student level where we are concentrating our efforts.

SM: The interesting thing, though, when I press people on this issue, is that they will say quite readily that the research assistants who are not circulated through like graduate students--here for four, five, six years, but stay for twenty, twenty-five, thirty years, are infinitely superior to a graduate student in terms of the range of experience they can have, so, in a way, it's better than a graduate student, so they'll say both. They'll tell me both.

BS: We do have a special category of technicians here who are very well trained and who are highly professional. Many of them have been here for years, and are extraordinarily good. They often participate in developing the experiments that are done, and are involved in the publications. They really are at a professional level which you don't often see.

SM: I reckon they are very impressive. What are some of your

dreams for the Jackson Laboratory? What would you like to see happen?

BS: I hope the Jackson Laboratory will continue to be in the forefront in mammalian genetics, bringing forward new ideas and approaches to answer important questions in basic genetics and developmental biology, and to find out more about what goes on in cancer and other diseases. I have the same sort of dream for the Jackson Laboratory as C.C. Little had.

SM: You don't want to concentrate on cancer?

BS: If we understood what controls heredity and development, we would have taken a giant step toward understanding what goes wrong in cancer, which is essentially a diesease where cells are growing out of control. We work on basic research questions, trying to understand how cells are controlled, what genes do during development--that kind of thing. This kind of research is critical in understanding cancer but it's equally applicable to studies of diabetes, anemias, just about any disease you could think of. It's also the kind of information you need to understand normal reporduction and growth. So we hopefully will continue to be recognized as a cancer center, and as very important in cancer research, but that doesn't imply that we are focussing on one disease. I want to make that clear.

SM: You don't hire staff then because they have a specialty in X or Y, except that they are interested in genetics?

BS: Before we recruit at all, we discuss the areas we might want to strengthen and what would be helpful to the Laboratory as a whole, in terms of approaches or disciplines or general areas of research. For example, we discussed and agreed on the need for recruiting more people with skills in molecular biology, who were interested in research on important questions in mammalian development. We don't have a department-like organization, where, for example, we feel we must have a certain number of individuals in one discipline or another.

SM: Would you like to see the Laboratory be departmentalized?

BS: No. There have been discussions off and on, for many years, about that, and I think most of us are in agreement that there's a tremendous advantage in not having the Laboratory departmentalized. The Laboratory is particularly strong in cooperation and interaction among research staff members, and the absence of departments facilitates that. Staff members themselves generally like the idea that every staff member is on equal footing in terms of the organization of the Laboratory. All research staff members report directly to the Director. They don't report through someone else. They all have the same direct opportunity for consideration in terms of their needs for space, equipment, or whatever it might be. The disadvantage of not having departments is mainly administrative, in terms of just plain day-to-day operations. I don't think that you could have a

hundred scientists reporting to one Director. Somewhere between forty and fifty would probably be the maximum that you could have and still maintain the non-departmentalized structure. I'd be interested whether any of the research staff are expressing that they would like to have departments?

SM: No one.

BS: And they feel that forty to fifty is about the number?

SM: Yes. No, that was always, consistently, whenever I asked the question about strengths and weaknesses, that was one of the strengths of the Lab, precious about the place, and it does make people very accessible to one another and cooperative and interested in cross-disciplinary mixes, and sensitive--

BS: Well, I think that's pretty consistent. I'd be interested in what others had to say about strengths and weaknesses.

SM: Well, it depends on who they are, of course. The geneticists will pick out the stocks, the resources, and how this makes it possible to do so many interesting things. The non-geneticists will pick out more the freedom of research, the fact that there's no one breathing down their neck, the fact that they have an interdisciplinary mix so that you get stimulation--it depends on who they are, and for a lot of them, another strength is the area, the nice--The younger people haven't really been here long enough to pick out major weaknesses.

BS: They are also a very enthusiastic group.

SM: They are, they are! I have encountered that. I have been interviewing scientists now for several years, on different projects, and this was the first time I had people incredibly enthusiastic, and lab tours, and I felt they were going to turn around and ask me for a hundred thousand dollars! (laughter) I mean, this is how it was. But the older people--it all depends on nostalgia.

BS: Yes, the "good old days," when C.C. Little was here and there wasn't so much bureaucracy--

SM: "We were all a family." "I knew everybody else's name." "I had a beautiful view out my office window and now there's another building there." and "Now I don't know everybody when I walk down the corridor."

BS: Well, yes, that's understandable, but there's nothing we can do about that. In every institution that's grown a lot in a relatively short time--and fifty years isn't that long a time--people look back to when there were only fifteen people and compare things to how it was back then. I would like to have been here then too!

SM: But I am sure, when they were going through it, they thought that five years ago was better.

BS: You'd have to have done a project like this back then, so you could compare.

SM: That's right. One thing I'd like to pick up though, in this thing, too, is an issue that has run through all the tapes, and that is the changing environment of science.

BS: Yes, I should have mentioned that.

SM: When they talk about this nostalgia of having seen it before, I think there is a significant difference between, say, doing science fifteen years ago, in terms of funding, and the mindset of the government, and all the--compared to-

BS: Oh absolutely. There has been a tremendous change in what it's like to be a scientist in the United States. Fifteen or twenty years ago you went into science because you were excited about it and you believed that if you had good ideas and you followed through on them and worked hard, you would be a successful scientist, and that you would obtain your grants and all good things would come to you. And it was fun. There was a more relaxed mood. Scientists would sit around for hours, arguing about experiments and talking about the philosophy of this or that aspect of science. There was a lot of fun in science. But especially in the last four or five years, as funding has become tighter and tighter, the tension has grown. Now people realize that, no matter how bright you are, no matter how hard you work, you may still loose your funding. You look around and you see people for whom you have the highest respect, people you think are outstanding scientists who have lost their funding. Scientists have to worry about the people who work for them, about the security of other people's jobs, as well as their own. It's very disruptive; it's very discouraging, and there's sort of a general tension and nervousness all through

the scientific community that takes away a lot from the pleasure you expected to have in your career when you went into it in the first place. There's a limited amount that an institution can do about that. The major funding at most research institutions and universities and scientific departments comes from the government, and that funding is now unstable. We try, as much as we can, to provide some institutional funds to tide people over, to soften some of these blows, but there is nothing we can do that will get away from this general tension, the general psychological effect of the uncertainties of federal funding for research.

SM: It's certainly been a theme that has run through this study and it certainly has, in terms of the institution, an impact on morale.

BS: Yes, you can look at the institution and see that our research funding is growing by leaps and bounds. In spite of what's happening nationally, funding here is excellent. A few people have had trouble but most of our staff are doing **very** well. Still they are a part of the bigger scientific community, and they see this problem everywhere, and it worries them. It interferes with progress in laboratory research, when people are distracted and tense over a situation like this.

SM: To what extent, too, do you think it's going to change the basic "adventurous spirit" in science? To what extent will people begin to develop projects that they think will be strictly utilitarian, with a real payoff in three years, that

will lead to another grant, as opposed to the speculative, far out, unpopular--

BS: Well, a lot of people are worried about that. In fact, it doesn't seem to be the case. What often happens now is that Study Sections will award the best priority scores to the projects they think are exciting, and the "sure things" they'll approve, but without enthusiasm. Actually some of the projects that are in most jeopardy are solid but unexciting projects that don't get a good enough priority score to be funded. I think where you do see more of a problem is with young people just starting out. There's less of a tendency now for Study Sections to take a chance on a young person who has good ideas but doesn't have much data yet, who doesn't have much of a track record. All of us are very worried about finding support to let young people get started, until they can establish some sort of track record. However, there's no really solid information as to which types of research--routine or imaginative--is being better funded, and there's no good way to get at that statistically. Our impressions are based on the limited areas we happen to get involved in reviewing. Something that everybody agrees on, though, is that an awful lot of very good research is not getting done because of funding problems. This is having a negative effect on the scientists.

SM: Now, at the Lab in general, are there any plans afoot to try to cushion the blow in terms of building up private money?

BS: That has been one of our goals over the last five years, trying to find more sources of private funds. We have a development drive going on now, and one of the major goals is to get more private support to cushion the blow to research from the loss of federal funding.

SM: That's not easy, I would think.

BS: No.

SM: What are some of the frustrations in your job, aside from the fact that you have to walk on water at least three times a day?

BS: The frustrations are mostly just short-term frustrations. Very often you end the day not able to look at anything you can recognize that you have accomplished that day, but still having put in a lot of effort. If you look over a longer range, you **can** see progress and you're not as frustrated.

SM: You have to have a long-term view, I guess.

BS: Right.

SM: Patience. What are some of the rewards?

BS: Oh, I think probably the greatest rewards are being able to look at the Laboratory and see that it really is moving forward, that things are going well here. Scientifically, the Laboratory is progressing and we all have a part in it.

SM: Now, if you had a magic wand--I ask this question of everyone, and it elicits some interesting responses--if you had a magic wand and could wave it and change the Lab however you please, what would you do?

BS: I think I wouldn't wave it.

END OF INTERVIEW